

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number
WO 2005/071887 A1

(51) International Patent Classification⁷: **H04L 12/18**, 1/18

(21) International Application Number:
PCT/IB2005/050242

(22) International Filing Date: 20 January 2005 (20.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0401467.6 23 January 2004 (23.01.2004) GB
0416475.2 23 July 2004 (23.07.2004) GB

(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HUS, Olivier, J-M.**

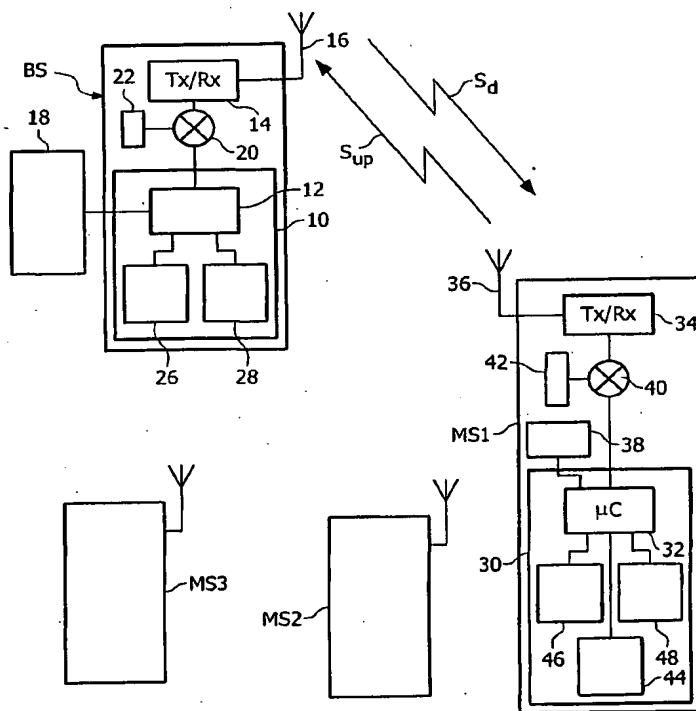
[FR/GB]; c/o Philips Intellectual Property, & Standards, Cross Oak Lane, Redhill Surrey RH1 5HA (GB). **BAKER, Matthew, P., J.** [GB/GB]; c/o Philips Intellectual Property, & Standards, Cross Oak Lane, Redhill Surrey RH1 5HA (GB). **MOULSLEY, Timothy, J.** [GB/GB]; c/o Philips Intellectual Property, & Standards, Cross Oak Lane, Redhill Surrey RH1 5HA (GB). **BUCKNELL, Paul** [GB/GB]; c/o Philips Intellectual Property, & Standards, Cross Oak Lane, Redhill Surrey RH1 5HA (GB).

(74) Agents: **WILLIAMSON, Paul, L.** et al.; c/o Philips Intellectual Property, & Standards, Cross Oak Lane, Redhill Surrey RH1 5HA (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

[Continued on next page]

(54) Title: A PACKET DATA MULTICAST COMMUNICATION SYSTEM, A STATION, AND A METHOD OF OPERATING THE SYSTEM



(57) Abstract: A method of operating a packet data multicast communication system which comprises a network or NodeB (BS) and a plurality of mobile stations (MS1, MS2, MS3). The network and the mobile stations have transceiving equipment (14, 34) for the transmission of data packets on a downlink between the network and mobile stations, and feedback signalling (ACK/NACK) on an uplink. The mobile stations have means for receiving a data packet transmitted by the first station, means (46) for measuring the quality of reception, means (30, 48) for determining into which one of at least three predetermined quality ranges the measured quality falls. Each of the at least three predetermined quality ranges represents a respective transmitter behaviour of the first station and the transmitter behaviour corresponding to at least two non-contiguous ones of the quality ranges is identical.



MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

- (84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,

EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.